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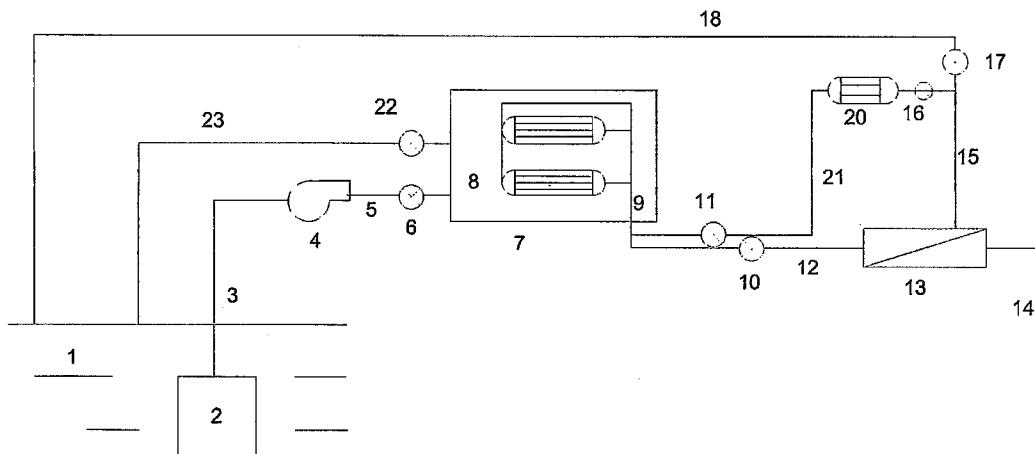
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(54) Title: PROCESS AND APPARATUS FOR PURIFYING IMPURE WATER USING MICROFILTRATION OR ULTRAFILTRATION IN COMBINATION WITH REVERSE OSMOSIS



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(57) Abstract: A method of purifying impure water contaminated with a filterable impurity and a dissolved impurity, such as seawater, comprising the steps of: providing impure water to a primary microfiltration or ultrafiltration unit to remove the filterable impurity and produce impure filtered water contaminated with a dissolved impurity; providing the impure filtered water contaminated with a dissolved impurity to a reverse osmosis unit to produce a potable water stream and a residual reverse osmosis stream; and treating the residual reverse osmosis stream prior to reuse. The treatment may be in the form of passing through a secondary filter (such as another microfiltration or ultrafiltration membrane or a cartridge filter, and the subsequently treated reverse osmosis reject may be used to backwash the microfiltration or ultrafiltration unit.